

1. Claims 1-6 and 10-15 were rejected under §103(a) over Kunisato in view of Tsujimura and further in view of Morita. This rejection is respectfully traversed.

Claim 1 recites, among other things, a semiconductor element, comprising a substrate and an underlayer on the substrate comprising a first semiconductor nitride including at least Al, the crystallinity of the underlayer being set to have a full width at half maximum X-ray rocking curve value of 90 seconds or below.

Examiner Im contends that Kunisato discloses an underlayer with the crystallinity of the underlayer being set to have a full width at half maximum X-ray rocking curve value of 90 seconds or below. In support of her position, she cites column 7, lines 63-67 and Table 2 of Kunisato. Applicants respectfully submit that this is incorrect. Specifically, the section of Kunisato cited by Examiner Im is reproduced below:

The surface conditions and FWHM (Full Width Half Maximum) of X-ray diffraction spectrum were measured with AlGa<sub>N</sub> layers having various Al composition ratios. Table 2 below shows the measurements.

TABLE 2

Al Composition	Surface Conditions	X-ray FWHM (arcsec)
1.0	good	550
0.8	good	504
0.6	good	451
0.4	good	390
0.2	many pits	428
0	many pits	unknown

Table 2 clearly shows that the first semiconductor nitride layer in Kunisato (i.e., the claimed "underlayer" as asserted by Examiner Im) has a crystallinity, expressed in terms of a full width at half maximum X-ray rocking curve value, of 390 seconds or

above. The minimum value of 390 seconds disclosed in Kunisato is substantially greater than the 90 seconds or below value recited in claim 1 (by more than a factor of 4!). Therefore, Kunisato fails to disclose at least this feature recited in claim 1.

Applicants respectfully submit that both Tsujimura and Morita, used by Examiner Im to disclose different layer thicknesses, fail to overcome the deficiencies of Kunisato. Since claims 2-6 and 10-15 depend either directly or indirectly from claim 1, those claims are also believed to be allowable over the applied art. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

2. Claim 8 was rejected under §103(a) over Kunisato, Tsujimura and Morita in further view of Chiyo. Applicants respectfully submit that the arguments submitted above distinguish claim 1 from Kunisato. Since Tsujimura, Morita and Chiyo do not overcome the deficiencies of Kunisato, and since claim 8 depends directly from claim 1, claim 8 is also believed to be allowable over the applied art. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

In closing, during the telephonic interview, Examiner Im expressed her frustration regarding the protracted prosecution of this application, including the alleged over-broad nature of the pending claims and the fact that she would have to re-search this application yet again. Applicants are equally frustrated with the protracted nature of this prosecution-- this is the seventh response that Applicants have filed. It is noteworthy that, in the last four responses (including this response), Applicants have

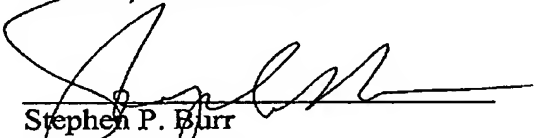
not amended the claims, noting in each instance the errors in the rejection. It would seem that by now (after seven actions), the PTO would have performed the necessary searching to evaluate the patentability of the pending claims over the prior art. For the reasons explained above, the claims are clearly patentable over the prior art.

If Examiner Im believes that further contact with Applicants' attorney would be advantageous toward the disposition of this case, she is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

October 24, 2005  
\_\_\_\_\_  
Date

Respectfully submitted,

  
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